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SDCS-ER-75-27

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**SPECIAL DATA COLLECTION SYSTEM EVENT REPORT ✓**

**Tadzhik SSR, 09 April 1975**

**J.R.Woolson, D.D.Solari, M.S.Dawkins, K.J.Hill, and R.J.Markle**

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**October 1975**

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**VELA Seismological Center**

**312 Montgomery Street, Alexandria, Virginia 22314**

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SDCS Event Report No. 27

TADZHIK SSR, 9 April 1975

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	Origin Time	Latitude	Longitude	$m_b$	$M_s$
NORSAR	22:25:36	37.5N	073.2E	5.4	N/A
LASA	22:25:34	38.0N	074.0E	5.5	N/A
PDE	22:25:28	38.1N	072.7E	5.5	N/A
Hagfors Array, Sweden	22:26:00	41 N	068 E	5.7	4.2

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

22:25:28	39.9N	073.5E	4.8	N/A
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FN-WV was not operational for this event.

Short-period signals associated with this event were recorded at WH2YK, RK-ON, LASA and NORSAR.

Analysis of long-period data produced associated signals only at NORSAR.

Details of the program used to obtain beamed vertical, radial and transverse long-period data at LASA, ALPA and NORSAR are in the process of being reviewed. Vertical beams are probably valid while horizontal beams are questionable.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of LASA and NORSAR short-period plots. LASA SP scaling factors are millimicrons per inch. Scaling factors are not reported for NORSAR short-period.

-A-

## STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES DEG MN SECS	ELEVATION METERS	INSTRUMENTATION	
				SHORT-PERIOD	LONG-PERIOD
ALPA	Alaska	65 14 00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35 41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32 58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41 19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09 43.0 N 067 59 09.0 W	213	18300	SL210 V SL220 H
NORSAR	Kjeller, Norway	60 49 25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

# HYPOCENTER DETERMINATION

INPUT FOR EVENT 9 APR 75  
22:25:35.0 37.500N 73.500E 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	REST		
NAO	22 33 29.3	-0.0	0.1	43.1	320.5
WH2YK	22 37 22.2	-0.0	-0.1	77.1	13.9
PK-ON	22 38 22.8	-0.0	-0.7	89.0	351.9
LAO	22 38 47.0	-0.0	0.7	93.8	359.8

## 67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
22:27:18.2	47.363N	71.462E	727. CALC	0.0	7	4
22:25:28.1	39.866N	73.518E	0. REST	0.6	4	4

CALC				REST			
2 . 1				2 . 1			
1	.	0		1	.	0	
0	0.0	0		0	0.0	0	
.	.	.	.	.	.	.	.
0	0.0	0	0	0	0.0	0	0
0	.	0		0	.	0	
0	0.0			0	0.0		

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 0.93  
MAJOR 265.6KM. MINOR 51.1KM. AZ= 11 AREA= 42621 SQ.KM. REST

# DATA SUMMARY

INPUT FOR EVENT 9 APR 75  
22:25:35.0 37.500N 73.500E 0KM.

STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIP	DIST
		TIME					MB	MS		
NAC	EP	22 33 29.3		AB	0.7	89.	5.15			43.1
NAO	LQ	22 49 30.0		LAB	20.0	7.				
NAC	LR	22 52 20.0		LAB	16.0	21.		4.08		43.1
WH2YK	EP	22 37 22.2		SPZ	0.9	10.	4.60			77.1
RK-ON	EP	22 38 22.8		SPZ	0.8	7.	4.55			89.0
IAC	EP	22 38 47.0		AB	1.0	15.	4.99			93.8

ORIGIN	LAT.	ICNG.	DEPTH (KM)	MAG	SDV	STA
22:27:18.2	47.363N	71.462E	727. CAIC	4.39	0.45	4
22:25:28.1	39.866N	73.518E	0. REST	4.82	0.30	4

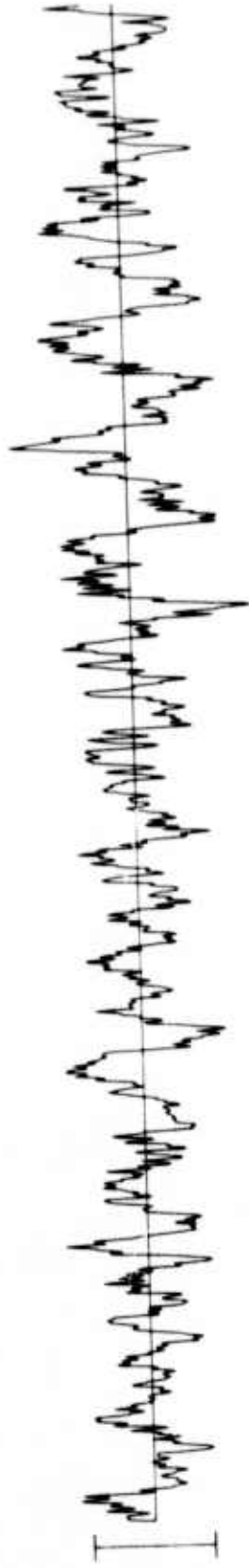
Average long-period magnitude ( $M_S$ ) is based on Rayleigh wave observations in the period range of 17 to 23 seconds per cycle.

WH2YK 09 APR 75

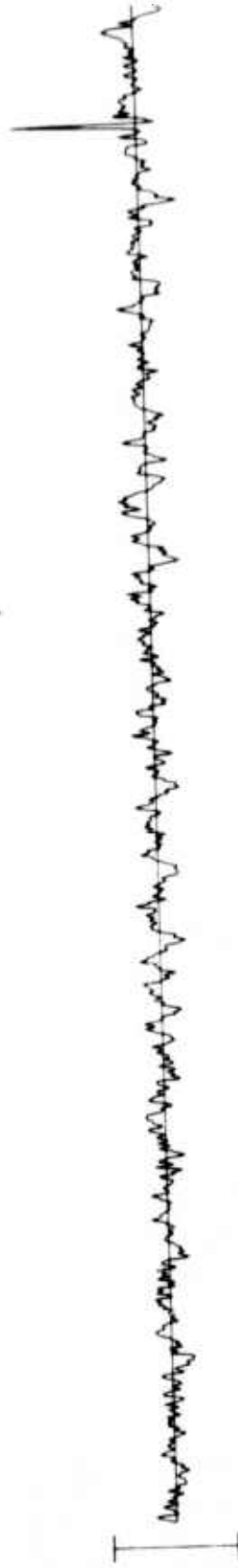
22:37:22.2



SPZ  
7.74 Mμ

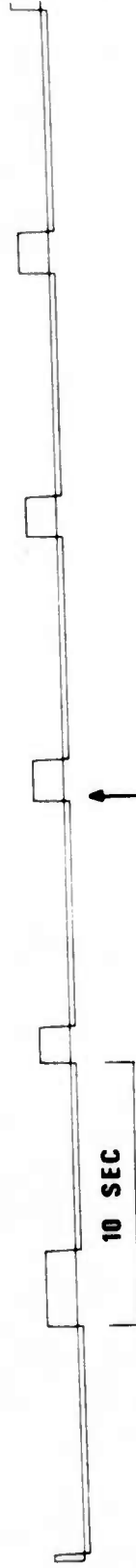


SPR  
7.84 Mμ



SPT  
21.49 Mμ

TIME



10 SEC

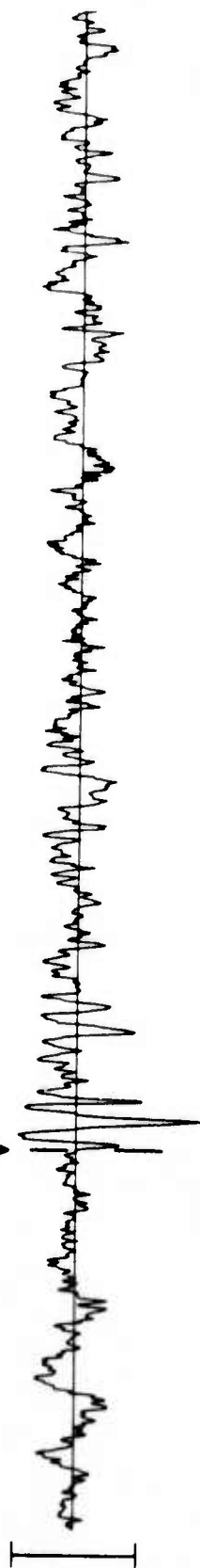
22:37:20



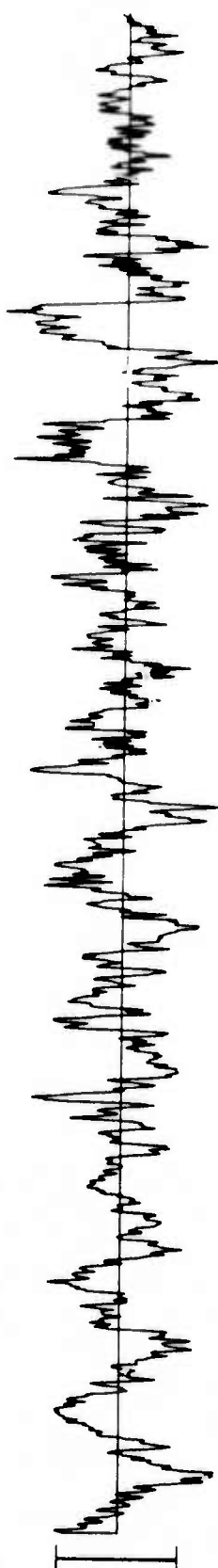
RK-ON 9 APR 75

22:38:22.8

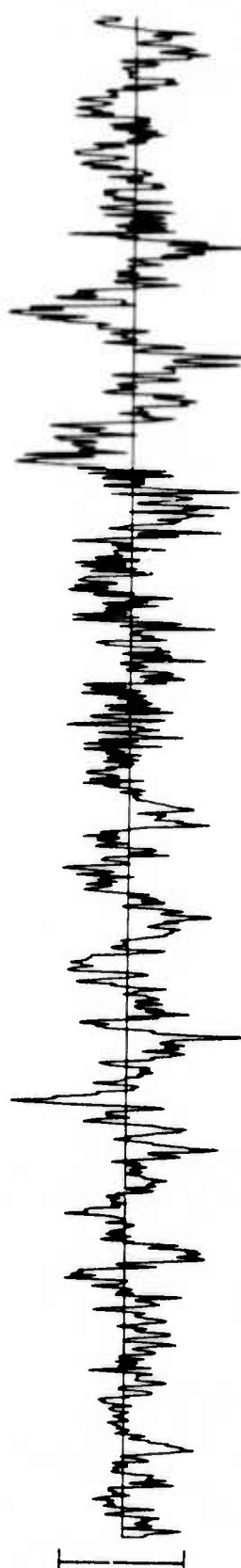
SPZ  
6.75 Mμ



SPR  
6.80 Mμ



SPT  
9.34 Mμ



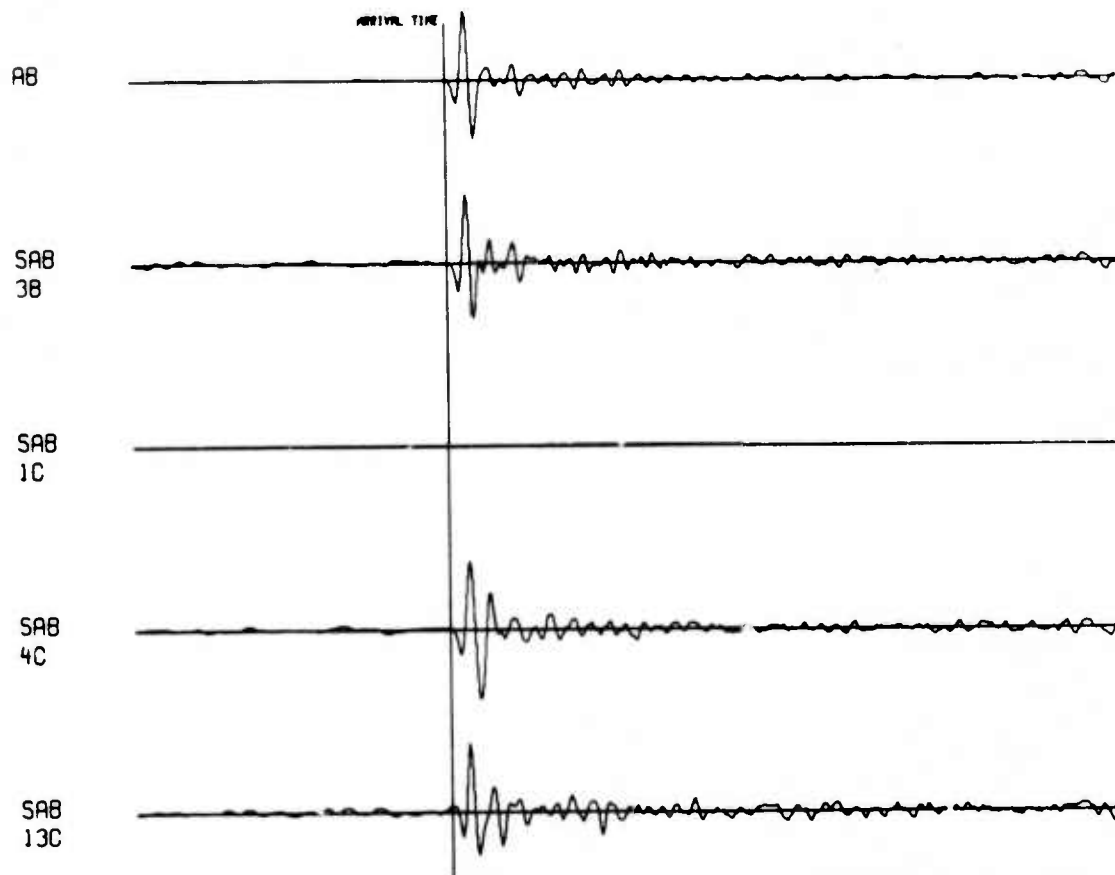
10 SEC

NORSAR EVENT FILE 1975 APR 9

EPX NO. 28980 ARR. 22.33.29.2 37.5N 73.2E 5.4MB 33KM

DIST = 44.8 AZI = 91.9 AMP = 61.0 PER = 1.0 UMETH 2

SCALE 1 \_\_\_\_\_ = 5 SECONDS



1 9 APR 1975

LASA

2 22 25 25 38.0N 74.0E 33C C 5.5 715 TADZHIK SSR

3 22 38 47.2 LAO P 15.3 1.0 24.5 95.8 359.8

EPX 9020

BP-B 0.6-2.0 HZ

ABN 10

22.38.37.

AB 40

FAB 36

WAB 36

PAB1 33

PAB2 44

PAB3 39

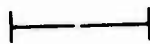
PAB4 27

10 SEC

# NORSAR LONG-PERIOD BEAMS 09 APR 75

LP VERTICAL

336.07 Mμ



22:52:20



LP RADIAL

252.58 Mμ

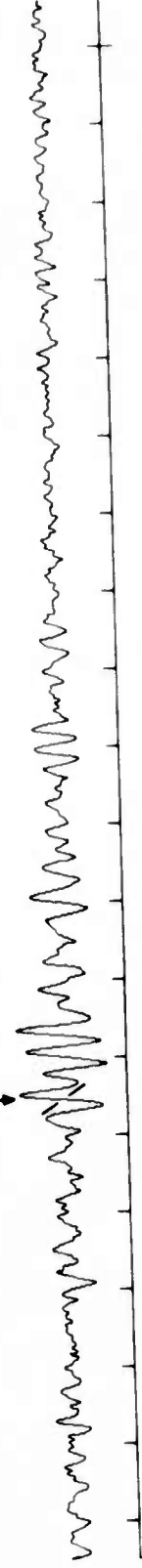


22:49:30



LP TRANSVERSE

211.81 Mμ



22:43:32



1 MIN

**ALPA LONG-PERIOD BEAMS 09 APR 75**

LP VERTICAL

340.62 Mμ



LP RADIAL

411.95 Mμ



LP TRANSVERSE

295.24 Mμ



22:57:33

1 MIN

**LASA LONG-PERIOD BEAMS 09 APR 75**

**LP VERTICAL**

**114.14 Mμ**



**LP RADIAL**

**132.38 Mμ**



**LP TRANSVERSE**

**146.25 Mμ**



**23:09:35**

**1 MIN**